

WHAT IS CLAIMED IS:

1. In a tilt-in window assembly having a sash and tracks that extend along opposite sides of the sash, wherein the sash is selectively positionable between a non-tilted position and a tilted position, a counterbalance system for the sash, comprising:

    a post extending horizontally into said tracks from opposite sides of the sash, wherein each said post rotates with said sash when said sash is moved between said tilted position and said non-tilted position;

    a brake structure coupled to each said post within said tracks, said brake structure having a first contoured surface thereon, wherein said brake structure and said first contoured surface rotate with said post as said sash is moved between said tilted position and said non-tilted position;

    a second contoured surface supported by said post within said track, wherein said second contoured surface contacts said first contoured surface, and wherein said first contoured surface and said second contoured surface fully intermesh

when said sash is in said non-tilted position and do not fully intermesh when said sash is in said tilted position.

2. The system according to Claim 1, wherein said brake structure abuts against said track when said first contoured surface is not fully intermeshed with said second contoured surface, therein locking said brake structure in place within said track.

3. The system according to Claim 1, wherein said brake structure does not contact said track when said first contoured surface and said second contoured surface are intermeshed.

4. The system according to Claim 1, wherein said brake structure includes a cylindrical hub that terminates at one end with said first contoured surface.

5. The system according to Claim 4, further including a curl spring, wherein said curl spring is

disposed around said cylindrical hub.

6. The system according to Claim 1, further including at least one curl spring and a spring holder for holding said at least one curl spring, wherein said second contoured surface is disposed on said spring holder.

7. In a tilt-in window assembly having a sash and tracks that extend along opposite sides of the sash, wherein the sash is selectively positionable between a non-tilted position and a tilted position, a counterbalance system for the sash, comprising:

    a post extending into said tracks from opposite sides of the sash, wherein each said post rotates with said sash when said sash is moved between said tilted position and said non-tilted position;

    a stationary structure supported by said post, wherein said stationary structure moves in said track with said post but does not rotate with said post when said sash is moved between said titled position and said non-tilted position;

a brake structure coupled to each said post within said tracks, said brake structure having a first contoured surface thereon that rotates with said post as said sash is moved between said tilted position and said non-tilted position;

    wherein said first contoured surface moves against said stationary structure when said sash is moved between said non-tilted position and said tilted position, causing said brake surface to be biased against said track when said sash is in said tilted position.

8. The system according to Claim 7, wherein said stationary structure is biased against said track when said sash is in said tilted position.

9. The system according to Claim 7, wherein said stationary structure has a second contoured surface that contacts said first contoured surface of said brake structure.

10. The system according to Claim 9, wherein said first contoured surface and said second

contoured surface intermesh when said sash is in the non-tilted position and do not intermesh when said sash is in said tilted position.

11. The system according to Claim 7, wherein said brake structure includes a cylindrical hub that terminates at one end with said first contoured surface.

12. The system according to Claim 7, further including a curl spring, wherein said curl spring is disposed around said cylindrical hub.

13. The system according to Claim 7, further including at least one curl spring and said stationary structure is a spring holder that retains said at least one curl spring.

14. A method of locking the sash of a tilt-in window in place in a window track, comprising the steps of:

providing a post on both sides of the sash that extend into the window track and rotate when

the sash is tilted;

attaching a brake structure to each post within the window track, wherein each brake structure has a first surface that rotates with said post when said sash is tilted;

providing a second surface within said track that does not rotate with said horizontal post when said sash is tilted;

wherein said first surface moves against said second surface when said sash is titled inwardly causing said brake structure to be biased against said track.

15. The method according to Claim 14, wherein said step of attaching a brake structure to each horizontal post includes providing a brake structure with a cylindrical section and sliding said cylindrical section over said post.

16. The method according to Claim 15, further including the step of providing a curl spring having an open center region and passing said cylindrical section of said brake structure through said open

center region so that said brake structure supports said curl spring.

17. The method according to Claim 14, wherein said step of providing a second surface within said track includes providing a spring holder, wherein said second surface is disposed on said spring holder.

18. The method according to Claim 17, further including the step of providing at least one curl spring and positioning said at least one curl spring within said spring holder.